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4	A1	5,013,649	5/7/91	Wang et al.	-435	-69.1	4/8/98		
40	A2	5,106,748	4/21/92	Wozney et al.	435	252.3	6/23/89		
an	A3	5,108,922	4/28/92	Wang et al.	435	240.2	7/31/90		
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Examiner Initial		Document Number	Date	Country	Class	Subclass	Translat ion Yes/No		
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as	B8	WO 94/21681	9/29/94	PCT					
40	В9	WO 94/26892	11/24/94	PCT					
ON	B10	WO 94/26893	11/24/94	PCT					
· CHO	B11	WO 95/01801 #	1/19/95	PCT					
(A)	B12	WO 95/01802	1/19/95	PCT					
an	B13	WO 95/16035	6/5/95	PCT					
4	B13	WO 96/36710	11/21/96	PCT					
				luding Author, Title, Pert					
Di	C1			nan Bone Marrow Osteoger mthasone," Endocrinology					
in	C2	Dijke et al., "Identification of Type I Receptors for Osteogenic Protein-1 and Bone Morphogenetic Protein-4," The Journal of Biological Chemistry, 269(5): 16985-16988 (1994).							
an	C3	Malpe <i>et al.</i> , "Evidence that Human Bone Cells in Culture Contain Binding Sites for Osteogenic Protein-1," <u>Biochemical and Biophysical Research Communications</u> , 201(3): 1140-1147 (1994).							
	Examiner W: 1. In S a date Date Considered 2/1/02								

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Form PTO	1449			Atty. Docket No. GI	5298A	Serial No.	09/148,23	
INFORMATION DISCLOSURE STATEMENT 1 U.S. PTO								
			Applicant(s) Moutsat	sos et al.				
7/14/99				Filing Date Septembe	r 4, 1998	Group 163	6	
7 - 47 - 5			U.S. PA	TENT DOCUMENTS				
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	C4	Perides et al., "Regulati		cluding Author, Title, I			na Groud	
47	C4				•		ing Olowu	
D	C5	Factor-β Superfamily," The Journal of Biological Chemistry, 269(1): 765-770 (1994). Nissinen <i>et al.</i> , "Bone Morphogentic Protein-2 is a Regulator of Cell Adhesion," Experimental Cell Research, 230: 377-385 (1997).						
	C6			Bone Morphogenetic Pr	otein-2 Enhar	ces Expression	n of	
W		Cells," Journal of Cellu	lar Physiolo					
an	C7 Postlethwaite <i>et al.</i> , "Osteogenic Protein-1, a Bone Morphogenic Protein Member of the TGF-β Superfamily, shares Chemotactic but Not Fibrogenic Properties with TFG-β," Journal of Cellula							
<i>V/</i>	G0.	Physiology, 161: 562-57			C 11 1 D' 1	· D · · · ·	n	
· M	C8	Iwaski et al., "Distributi		racterization of Specific of Biological Chemistry				
	C9			Protein-9 Binds to Liver				
. (1)		Endocrinology, 136(10)	_		cons and still	ididios i foilic	ration,	
,0.	C10	Lind et al., "Bone Morp			orphogenetic	Protein-4 and	B6	
CA		Stimulated Chemotactic	Migration	of Human Osteoblasts, F	Iuman Marrov	v Osteoblasts,	and US-	
		OS Cells," <u>Bone</u> , 18(1):						
On	C11		_	rotein-2 Stimulates Diffe		_		
(A)		Ligament Cells form Pa		Ossification of the Poster	nor Longitudi	nal Ligament,	"Calcified	
01	C12	Tissue Int., 60: 291-296 (1997). Lieberman et al., "In Vivo Bone Induction Via Retroviral Gene Transfer of BMP2 into a Stromal						
B	C12	Cell Line," Trans. Ortho			ene iransier (DIVIPZ INTO	a Stromai	
Ω/	C13	Lieberman et al., "Aden			nt RMP2 into	Human and D	odent	
Chr	013			ormation in Vivo," Trans				
.1	C14	Lieberman et al., "Region						
M		_		Bone Formation in Rod	_			
M	C15	Musgrave <i>et al.</i> , "Adenovirus-Mediated Direct Gene Therapy With Bone Morphogenetic Protein-2 Produces Bone," Bone, 24(6): 541-547 (1999).						
<u> </u>		william Son Ar		\				

Form PTO	-1449			Atty. Docket No. GI 5298A Serial No.			09/148,234			
INFORM	INFORMATION DISCLOSURE STATEMENT									
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10/14/99				Filing Date September	· 4, 1998	Group 163	36			
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OTHER DOCUMENTS (Including Author, Title, Pertinent Pages, etc.) C16 Barr et al., "Systemic Delivery of Recombinant Proteins by Genetically Modified Myoblasts						alasta "				
CM	C16	Science, 254: 1507-1509		recombinant Proteins by	Jeneticany IV	iodified Myor	oiasis,			
Us	C17	Louis <i>et al.</i> , "An Alternative Approach to Somatic Cell Gene Therapy," Proc. Natl. Acad. Sci., 85: 3150-3154 (1988).								
a	C18	Dhawan <i>et al.</i> , "Systemic Delivery of Human Growth Hormone by Injection of Genetically Engineered Myoblasts," <u>Science</u> , 254: 1509-1512 (1991).								
93	C19		Snyder <i>et al.</i> , "Neural Progenitor Cell Engraftment Correct Lysosomal Storage Throughout the MPS VII Mouse Brain," Nature, 374: 367-370 (1995).							
ay	C20	Lacorazza et al., "Expression of Human β-Hexosaminidase α-Subunit Gene (the Gene Defect of Tay-Sachs Disease) in Mouse Brains Upon Engraftment of Transduced Progenitor Cells," Nat. Med., 2: 424-429 (1996).								
an	C21	Snyder et al., "Potential	of Neural '	Stem-Like' Cells for Ger em," Adv. Neurol, 72: 12		-	ne			
· M	C22	Theis et al., "Recombin	Theis <i>et al.</i> , "Recombinant Human Bone Morphogenetic Protein-2 Induces Osteoblastic Differentiation in W-20-17 Stromal Cells," Endocrinology, 130: 1318-1324 (1992).							
Om	C23	Wang <i>et al.</i> , "Bone Morphogenetic Protein-2 Causes Commitment an Differentiation in C3H10T1/2 and 3T3 Cells," Growth Factors, 9: 57-71 (1993).								
an	C24	<u> </u>	ular Recons	struction with a Recombin		ducing Factor,	" Arch.			
An On	C25	Yasko et al., "The Heal	ing of Segm	nental Bone Defects Inductive J. Bone Joint Surg., 74:			n Bone			
an	C26	Gerhart et al., "Healing	Segmental	Femoral Defects in Sheep top. Rel. Res., 293: 317-3	using Recor	<u> </u>	n Bone			
· an	C27	Fang et al., "Stimulation of New Bone Formation by Direct Transfer of Osteogenic Plasmid Genes," Proc. Natl. Acad. Sci., 93: 5753-5758 (1996).								
2	C28	FORM PCT/ISA/210: P								
Examiner		Uin Se Sali		Date Considered 2	11/02					



Hry Sheet 1 of 3 / Brace

Form PTO-1449				Atty. Docket No. GI 5298A Serial No. 09/148,234				
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				Applicant(s) Mouts	atsos et al.			
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				TENT DOCUMENTS	5			
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date (If Appropr iate)	
	\A1	5,013,649	5/7/91	Wang et al.	435	69.1	4/8/98	
	A2	5,106,748	4/21/92	Wozney et al.	435	252.3	6/23/89	
	A3'	5,108,922	4/28/92	Wang et al.	435	240.2	7/31/90	
	A4	5,116,738	5/26/92	Wang et al.	435	69.1	4/26/91	
	A5	§,141,905	8/25/92	Rosen et al.	435	69.1	11/17/89	
	A6	5,187,076	2/16/93	Wozney et al.	435	69.1	3/7/90	
77	1 -			PATENT DOCUME	NTS			
Examiner Initial		Document Number	Date	Country	Class	Subclass	Translat ion Yes/No	
	B1	WO 91/18098	11/28/91	PCT			Teyno	
	B2	WO 93/00432	1/7/93	PCT			 	
	В3	WO 93/16099	8/19/93	PCT				
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	B13	WO 96/36710	11/21/96	PCT \				
	<u> </u>	OTHER DOCUM	ENTS (Inc	luding Author, Title, l	Pertinent Page	s, etc.)		
	C1	Cheng et al., "Differential of the Osteoblast Phenor	ation of Hum ype by Dexa	an Bone Marrow Oster mthasone," Endocrinol	ogenic Stromal	Cell In Vitro.		
	CZ	of the Osteoblast Phenotype by Dexamthasone," Endocrinology, 134(1): 277-286 (1994). Dijke et al., "Identification of Type I Receptors for Osteogenic Protein-1 and Bone Morphogenetic Protein-4," The Journal of Biological Chemistry, 269(5): 16985-16988 (1994).						
	C3	Malpe et al., "Evidence t Protein-1," <u>Biochemical</u>	hat Human I	Bone Cells in Culture C	Antain Rinding	Sites for Oct	eogenic (1994)	
Examiner				Date Considered				
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F rm PTO-1449 INFORMATION DISCLOSURE STATEMENT			Atty. Docket No. GI 5298A Serial No. 09/14		09/148,234					
			Applicant(s) Moutsatsos et al.							
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	<u> </u>						-1431			
	OTHER DOCUMENTS (Including Author, Title, Pertinent Pages, etc.)									
	C4	Perides et al., "Regulation of Neural Cell Adhesion Molecule and L. by the Transforming Grouph								
	C5	Factor-B Superfamily, Rhe Journal of Biological Chemistry, 269(1): 765-770 (1994).								
		Nissinen et al., "Bone Morphogentic Protein-2 is a Regulator of Cell Adhesion," Experimental Cell Research, 230: 377-388 (1997).								
	C6	Zheng et al., "Recombinant Humain Bose Morphogenetic Protein-2 Enhances Expression of Interleukin-6 and Transforming Growth Factor-81 Genes in Normal Human Osteoblast-Like Cells," Journal of Cellular Physiology, 159: 76-82 (1994).								
	C7	Postlethwaite et al., "Osteogenic Protein-1, a Bone Morphogenic Protein Member of the TGF-β Superfamily, shares Chemotactic but Not Fibrogenic Properties with TFG-β," Journal of Cellular Physiology, 161: 562-570 (1994).								
	C8	Iwaski et al., "Distributio	Iwaski et al., "Distribution and Characterization of Specific Cellular Binding Proteins for Bone							
	-	I Morphogeneuc Protem-2	worphogenetic Protem-2, Journal of Biological Chemistry, 270(10): 5476-5482 (1995)							
	C9	Song et al., "Bone Morp	hogenetic P	totein-9 Binds to Liver Cells	and Stim	ulates Prolifer	ation,"			
	C10	Lind et al., "Bone Morphogenetic Protein-2 but not Bone Morphogenetic Protein-4 and B6 Stimulated Chemotactic Migration of Human Osteoblasts, Human Marrow Osteoblasts, and US.								
	C11	OS Cells," Bone, 18(1): 53-57 (1996). Kon et al., "Bone Morphogenetic Protein-2 Stimulates Differentiation of Cultured Spinal Ligament Cells form Patients with Ossification of the Posterior Longitudinal Ligament," Calcified Tissue Int., 60: 291-296 (1997).								
	C12	Lieberman et al., "In Viv Cell Line," Trans. Orthor	o Bone Ind	nction Via Retroviral Gene	ransfer of	BMP2 into a	Stromal			
	C13	Lieberman et al., "Adeno	viral Gene	Transfer of Recombinant BN	AP2 into H	Iuman and Ro	dent			
	C14	Bone Marrow Cell Induces Bone Formation in Vivo," Trans. Orthop. Res. Soc., 43: 427 (1997). Lieberman et al., "Regional Gene Therapy with a BMP-2-Producing Murine Stromal Cell Line Induces Heterotopic and Orthotopic Bone Formation in Rodents," J. Orthop. Res., 16(3): 330-339 (1998).								
	C15	Musgrave et al., "Adenov Produces Bone," Bone, 2	rirus-Media 4(6): 541-5	ted Direct Gene Therapy Wi 47 (1999).	th Bone M	lorphogenetic	Protein-2			
Examiner				Date Considered						

Hry Sheet 3 of 3

Form PTO	-1449			Atty. Docket No. GI 5298A Serial No. 09/148,2			09/148,234	
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OTHER DOCUMENTS (Including Author, Title, Pertinent Pages, etc.)								
	C16	Barr et al., "Systemic Delivery of Recombinant Proteins by Genetically Modified Myoblasts,"						
	217	Science, 254: 1507-1509						
	C17	Louis et al., "An Alternative Approach to Somatic Cell Gene Therapy," Proc. Natl. Acad. Sci., 85:						
	C18	3150-3154 (1988). Dhawan et al., "Systemic Delivery of Hinman Growth Hormone by Injection of Genetically						
		Engineered Myoblasts,"	Science, 2	54: 1509-1512 (1991).	ny mjerin	OH OF CENERAL	ашу	
	C19	Snyder et al., 'Neural Pr	rogenitor C	ell Engraftment Correct Lyso	somal Sto	orage Through	out the	
	<u> </u>	MPS VII Mouse Brain,"	' <u>Nature</u> , 37	4: 367-370 (1995).				
	C20			ıman β-Hexosaminidase α-Sı				
 		Tay-Sachs Disease) in M <u>Med.</u> , 2: 424-429 (1996)	douse Brain	as Upon Engraftment of Trans	sduced Pr	ogenitor Cells	s," <u>Nat.</u>	
	Ç21			Stem-Like Cells for Gene T	herany an	d Renair of th		
l,		Degenerating Central No	ervous Syst	em," Adv. Neurol, 72: 121-13	32 (1997)	r n veban or m	C	
100	C22	Theis et al., "Recombina	ant Human	Bone Morphogenetic Protein	-2 Induce:	s Osteoblastic		
	~~	Differentiation in W-20-	17 Stromal	Cells," Endocrinology, 130;	318-132	4 (1992).		
ļ	C23	Wang et al., "Bone Morn	phogenetic	Protein-2 Causes Commitme h Factors, 9: 57-71 (1993).	nt an Diff	erentiation in		
	C24			n Factors, 9: 57-71 (1993).	Rone-Ind	bicing Factor'	" Arch	
		Otolaryngol Head Neck	Surg., 117:	1101-1112 (1991).	TOTIC-TIC	uome i acioi,	Aucii.	
	C25	Yasko et al., "The Healing	ng of Segm	ental Bone Defects Induced b	Recom	binant Human	Воле	
	- COC	Morphogenetic Protein (<u>,rhBMP-2),</u>	" J. Bone Joint Surg., 74: 659	1-67Q (199	72).		
	C26	Gerhart et al., "Healing &	Segmental I	Femoral Defects in Sheep usi	ng Recon	ibinant Humai	n Bone	
	C27			op. Rel. Res., 293: 317-326 (one Formation by Direct Tran		Lacaria Plac	د د.	
		Genes," Proc. Natl. Acad	d. Sci., 93;	S753-5758 (1996)	ister of C	steogeme russ	mia	
	C28	FORM PCT/ISA/210: PC						
Examiner				Date Considered				